COMPARISON OF EPA REQUIREMENTS AND NEW IDNR PROPOSED REQUIREMENTS

CHAPTER 135- TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS

Citation	Significant Federal Requirements	IDNR Proposed Revisions	Revisions after Stakeholder Input
Definitions 567-135.2(455B) pg.2-13	EPA adds definitions for airport hydrant fuel distribution system, dispenser, Class A operator, Class B operator, Class C operator, dispenser system, field-constructed tank, motor fuel, regulated substance, replaced, secondary containment, training program, under-dispenser containment	IDNR adds definitions for ethanol, light nonaqueous-phase liquid (LNAPL), over-excavation, temporary closed tank, training program	
567-135.3(455B) *UST Systems- Design, Construction, Installation, Notification*			
Performance Standards for New UST Systems 135.3(1) pg.13-15	Owners and Operators must install secondary containment and interstitial monitoring for all new and replaced tanks and piping (except safe suction piping and piping associated with field constructed tanks greater than 50,000 gallons in size and airport hydrant systems). Owners and operators must install UDCs for all new dispenser systems.	IDNR deadline for implementing secondary containment requirements (including tanks, piping, sumps and UDC was November 28, 2007.	
Upgrading of Existing UST Systems 135.3(2) pg.17	If the internal lining is no longer performing in accordance with original design specifications and cannot be repaired in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, then the lined tank must be permanently closed in accordance with rule 567—135.15(455B)	If 10% or more of the tank lining is in need of repair, the tank must be permanently closed.	***The average age of lined tanks with no external protection is 41 years old. The chance of that tank having external point corrosion (perforations) is likely. Repairing more than 10% of the tank seems to exceed the definition of a repair, which is to restore the lining to proper operating condition, not replace the lining.***

			Active Sites: ***45 Tanks Lined Only without CP*** ***383 Lined Tanks with CP*** ***Temp Closed Sites:*** ***13 Tanks Lined Only*** ***13 Lined Tanks with CP***
Notification Requirements 135.3(3) pg.19	EPA adds requirement that owners notify the implementing agency within 30 days of UST system ownership change. Notify the agency at least 30 days prior to switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel. Must demonstrate compatibility	New owners are responsible for any current and back tank management fees with late fee penalty that have not been previously paid. An owner or operator who brings into use an underground storage tank, shall complete and submit to the department a copy of the registration form provided by the department within 30 days of the final installation inspection required in 134.27(2)"c" by the licensed installation inspector. The owner or operator shall not allow the deposit of any regulated substance into the tank without prior approval of the department or until the tank has been issued a tank registration tag and is covered by an approved financial responsibility mechanism in accordance with 567—Chapter 136. *NOTE: Proposed language is not currently in draft regulation for 135.3(3)"c"* If an owner or operator fails to register an underground storage tank within 30 days of the final installation inspection required in 134.27(2)"c" by the licensed installation inspector, or the owner or operator shall pay an additional $250 upon registration of the tank. *NOTE: Proposed language is not currently in draft regulation for 135.3(3)"k"*	***IDNR will update the Real Estate Professionals Booklet to better notify new buyers of their responsibility for fees.***

Registration Tags and Annual Management Fee 135.3 (5) pg.20		The $250 per tank late fee must be paid if the annual tank management fee is not paid by February 15. (Changed from April 1)	***IDNR proposes to change the date to March 1.***
Previously Unregistered Petroleum Underground Storage Tanks 135.3(6) pg.21		The tank management fee and any late fees shall be paid for past years in which a tank was not registered.	
Delivery Prohibition Process 135.3(8) pg.23		Delivery prohibition may be enforced due to failure to pay annual tank management fee or if tanks have been closed for longer than 3mo. or temporary closure.	***IDNR proposes to add:*** ***Delivery prohibition may be enforced if the owner/operator fails to complete monthly/annual walkthroughs.***
Secondary Containment Requirements for UST System Installations 135.3(9) pg.25	Must replace the entire piping run when 50 percent or more of piping is installed.	Tanks and piping with secondary containment installed prior to November 29, 2007 with interstitial monitoring must continue to use interstitial monitoring as the primary leak detection system.	
567-135.4 (455B) *General Operating Requirements*			
Spill and Overfill Control 135.4(1) pg.27-29	Owners and operators of UST systems with spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping must meet these requirements to ensure the equipment is operating properly and will prevent releases to the environment: (1) Spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) and containment sumps used for interstitial monitoring of piping must prevent releases to the environment by meeting one of the following: 1. The equipment is double walled and the integrity of both walls is periodically monitored at a frequency not less than the frequency of the walkthrough inspections	DNR provides specific steps to take in cases where the CP system is no longer operating and has not operated in the past six months, after six months, and when it hasn't operated for 12 months or more.	***IDNR is reviewing non-operating CP system requirements.*** ***Three-year testing must be conducted by an UST professional. Testing and inspecting of equipment requires years of experience, field-based troubleshooting and certifications from manufacturers. PEI RP900 and RP1200 call for the use of skilled, professional service technicians to conduct annual walkthrough inspections and triennial testing.*** ***Inspecting overfill prevention equipment requires removing the overfill device from the tank (e.g.,***

	described in 567-135.21(2)*"f"*. If owners and operators discontinue periodic monitoring of this equipment they must begin meeting paragraph 2 of this section and conduct a test within 30 days of discontinuing periodic monitoring of this equipment; or 2. The spill prevention equipment and containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing in accordance with one of the following criteria: • Requirements developed by the manufacturer (Note: Owners and operators may use this option only if the manufacturer has developed requirements); or • Code of practice developed by a nationally recognized association or independent testing laboratory; or • Requirements determined by the Iowa DNR to be no less protective of human health and the environment than the requirements listed in this section. (2) Overfill prevention equipment must be inspected at least once every three years. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in 135.3(1)"*c"* and will activate when regulated substance reaches that level. Inspections must be conducted in accordance with one of the criteria in paragraph *"c"*(1) of this section.		***automatic shutoff, ATG probe or ball float).***
Repairs and Replacement 135.4(4) pg.30	Testing is required for repairs to secondary containment areas of tanks and piping used for interstitial monitoring and to containment sumps.		

Reporting and Record Keeping 135.4(5) pg.31		Owners and operators must notify the department of any change in Class A/B/C operators and loss of financial responsibility	***IDNR is not requiring notification of C operator changes.***
Training Required for UST Operators 135.4(6) pg.32	When a facility is found out of compliance the department must require the owner or operator to retrain the designated A or B operator under a plan approved by the department. Retaining must occur within 30 days from departmental notice for Class A and B operators and 15 days for Class C operators.	Class C Operators must be retrained ever year. Class A and B operators must take annual refresher training.	***IDNR proposes 3 year retraining cycle for A/B operators.***
UST Operator Training Course Requirements 135.4(8) pg.34	Individuals must attend every session of the training and take the department's examination and attend examination review.	The department will prepare an exam to be used by all training vendors and attendees must pass with 85% correct.	
Periodic Operation and Maintenance Walkthrough Inspections 135.4(12) pg.36-37	Conduct inspections to properly operate and maintain UST systems. Owners and operators must meet one of the following: *a.* Conduct a walkthrough inspection <u>every *30 days*</u> that includes checking the following equipment: (1) Spill prevention equipment - visually check for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it attaches securely on the fill pipe and gasket is in good condition; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area. (Exception: spill prevention equipment at UST systems receiving deliveries at intervals greater than every 30 days may be checked prior to each delivery) (2) Release detection equipment - check to make sure the release detection equipment is operating with no alarms or other unusual	Owners and operators with uncontained sumps must visually inspect all dispensers at least once per month for leaks. An inspection log must be kept as part of the site records. If under dispenser containment is present the visual inspection is not required. *Currently under 135.5(1) pg. 39*	***<u>Monthly Walkthroughs</u>*** ***It is expected that Class A/B operators conduct monthly walkthrough inspections. Class A/B operators were trained for this, and these inspections are vital to the safe and proper operation of the UST system. The inspections should greatly reduce the releases from spill buckets.*** ***<u>Annual Walkthroughs</u>*** ***IDNR recommends that annual walkthrough inspections be conducted by UST professionals. PEI RP900 and RP1200 call for the use of skilled, professional service technicians to conduct annual walkthrough inspections and triennial testing.***

	operating conditions present; and ensure records of release detection testing are reviewed and current. *b.* Conduct a walkthrough inspection *annually*, checking the following equipment: (1) Containment sumps - visually check for damage, leaks to the containment area, or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled sumps with interstitial monitoring, check for a leak in the interstitial area, and (2) Hand held release detection equipment - check devices such as tank gauge sticks or groundwater bailers for operability and serviceability; (3) Conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory that checks equipment comparable to (*a*) and (*b*) of this section; or *c.* Owners and operators must maintain records (in accordance with 135.4(5)) of operation and maintenance walkthrough inspections for one year. Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries. Note to paragraph (b)(3): the following code of practice may be used to comply with paragraph (b)(3) of this section: Petroleum Equipment		***Walkthrough inspections could be conducted by a third party compliance inspector who can combine the annual and two-year inspections.*** ***Annual walkthrough inspections must be conducted on all containment sumps.*** ***IDNR proposes the annual walkthrough be submitted to the department at the same time on even years as the compliance inspection is submitted on odd years. This helps owners stay consistent with their annual walkthroughs and compliance inspections.*** ***IDNR proposes that sites that do not conduct monthly/annual walkthroughs are subject to delivery prohibition.*** ***Reinstatement criteria requires owner/operator to schedule a walkthrough with a 3rd Party Installer/Installation Inspector/Compliance Inspector.***

	Institute Recommended Practice RP 900, "Recommended Practices for the Inspection and Maintenance of UST Systems"		
567-135.5(455B) *Release Detection*			
General Requirements for all UST Systems 135.5(1) pg.38	Leak detection equipment must be properly operated, maintained, and tested. • Annual testing of leak detection equipment: 1. Automatic tank gauge and other controllers: test alarm; verify system configuration; test battery backup; 2. Probes and sensors: inspect for residual buildup; ensure floats move freely; ensure shaft is not damaged; ensure cables are free of kinks and breaks; test alarm operability or running condition and communication with controller; Automatic line leak detector: test operation to meet criteria in 135.5(5)"*a*" by simulating a leak; 3. Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and 4. Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.	When an owner and operator continually show the inability to conduct leak detection with the method being used, the department may require the owner and operator to find an alternative leak detection method. Temporary closure may be required or delivery prohibition enforced if the owner and operator cannot demonstrate compliance with leak detection. If an owner and operator does not consistently conduct leak detection as required, the department may require the owner and operator to contract with a third party to perform leak detection at the site and may require temporary closure until they can demonstrate compliance.	
Methods of Release Detection for Tanks 135.5(4) pg. 41-43	"b." Manual Tank Gauging requirements are expanded to reflect information in EPA Manual Tank Gauging guidance doc. "c." Includes 3rd party certification and U.S. EPA test procedures "d." ATG leak test must be performed when product level is within 20% of highest monthly product level. ATG equipment must be certified		

	by 3rd party and meet EPA test procedures "e." Vapor monitoring equipment use for monthly release detection must be 3rd party certified and meet EPA test procedures "h." Statistical inventory reconciliation (SIR) is an approved method of leak detection. Provides performance standards that SIR methods must meet. This method must meet 3rd party certification and EPA test procedures. Records of site assessments are required for vapor and groundwater monitoring.		
Methods of Release Detection for Piping 135.5(5) pg.45	Line leak detection methods must meet 3rd party certification and EPA test procedures		
Release Detection Record Keeping 135.5(6) pg.45	Site assessment required for vapor and groundwater monitoring. Records must be signed by engineer or professional geologist or equivalent discipline		
567-135.6 (455B) *Release Reporting, Investigation, and Confirmation*			
Reporting of Suspected Releases 135.6(1) pg.46	"b." Includes "defective system equipment or component" and secondary containment under unusual operating conditions. "c." Adds exceptions to reporting a release from monitoring systems with secondary containment.		
567-135.15(455B) *Out-of-Service UST Systems and Closure*			
Temporary Closure 135.15(1) pg.85-87		When an UST System is not in compliance with performance standards for new UST Systems it must be permanently closed. The tanks cannot be returned to service. DNR provides specific steps to maintain temporary closure. When an UST system is temporarily closed	

		for more than 12mo the tanks must be permanently closed. (Exceptions; the department may approve an extension if the owner can show the UST System will be returned to service and a site check is conducted)	
Permanent Closure and Changes-in-Service 135.15(2) pg.87		Permanent closure must be conducted by an Iowa licensed remover. Certified Groundwater Professional must oversee sampling.	
Assessing the Site at Closure or Change-in-Service 135.15(3) pg.88-89		Multiple groundwater monitoring wells may be required for closure. Soil sample requirements for single and double wall piping to be included in department guidance for permanent closure.	
567-135.20 (455B) *Compliance Inspection of UST System*			
135.20(1) pg.95		A compliance inspection shall be conducted within 3-6 months of new UST installation.	***IDNR is not requiring inspections 3-6 months after new UST installations. It is expected that monthly/annual walkthroughs and secondary containment requirements will identify problems with a new UST system.***
567-135.21 (455B) *UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems*			
135.21(1-2) pg.96-100	Previously deferred UST systems must implement this section of the regulation.	At this point, Iowa has no field constructed tanks in operation nor do any of its airports have hydrant distribution systems.	

Revisions of LUST Assessment and Remediation

Citation	Proposed Revisions	Revision Purpose
Free Product Assessment and Removal 135.7(5) pg.50	Added: "d"(11) "Identification of all water lines, regardless of construction material, within the area of free product. A water line shall be considered within the area of free product if it is located within the boundary of the free product plume as defined by wells unless it can be demonstrated that no LNAPL exists within 10 feet (horizontally or vertically) of the water line and the LNAPL is not migrating nor is likely to migrate. Water lines within the area of free product must be relocated unless there is no other option and the department has approved an alternate plan of construction. See 135.12(3) "c"." Inserts highlighted sections to "f":…."When free product activities have been terminated, owners and operators must inspect the monitoring wells monthly for at least a year unless another schedule is approved by the department. The department must be notified and can require free product recovery activities be reinitiated if during the monthly well inspections it is determined the product thickness in a monitoring well exceeds 0.02 foot"….	Revised to include language regarding identifying and managing water lines located in an area of free product, previously found only in 135.12(3)c, to the requirements for the Free Product Recovery Assessment Report. Adds option language for groundwater professional to document greater than 10 feet of separation between the LNAPL and the water line. Adds additional discretion to the department for deciding when free product recovery may be terminated at a site. The current language is very specific "one size fits all" language.
Chemicals of concern 135.8(3) pg.51	Delete last sentence in (3): "At Tier 2 and Tier 3, owners and operators have the option of analyzing for these specific constituents and applying them to the specific target levels in Appendices A and B instead of using the TEH conversion method if an approved laboratory and laboratory technique are used".	Removes the option for Owner/Operator to sample for specific constituents and apply the site specific target levels in Appendix A & B. This option has not been used over the years likely due to the analytical costs and difficulty in meeting the low detection limits for the constituents.
Group two chemicals 135.10(2)m pg.63	Delete"*m:* "*Group two chemicals.* At Tier 2, chemical-specific values for the four chemicals may be used or the largest of the four TEH default values. (Refer to Appendix B and department Tier 2 guidance for using the TEH conversion method for modeling.) If chemical-specific values are used, the analytical method must be approved by the department prior to its use."	For Tier 2, this also required the cumbersome procedure of converting the single constituent results back to total extractable hydrocarbons values to compete the Tier 2 modeling.
Source Width 135.10(2)f(3) pg.62	Delete (3) "Estimating source width when free product is present. Groundwater from wells with free product must be analyzed for BTEX and the source width and source length are	Removes language allowing free product plume source width to be used in Tier 2 modeling.

	estimated using the criteria in 135.10(2)*f*(1) and 135.10(2)*"f"*(2) above. For those sites with approved site cleanup reports and free product present in wells but actual BTEX values are not available, source width and source length may be estimated in accordance with 135.10(2)*"f"*(1) and 135.10(2)*"f"*(2) using the default BTEX values for groundwater in 135.18(4) or estimated by using the area representing half the distance between wells with free product and wells without free product, whichever method is greater."	
Bedrock Assessment 135.10(3)a(2) pg.64	Adds sentence: "If soil contamination above a Tier 1 level is not identified or an over-excavation of contaminated soil has successfully removed all soil contamination greater than a Tier 1 level, then monitoring wells can be installed in the source area and the site can be evaluated as exempt granular bedrock."	Adds option of installing monitoring wells in the source area at granular bedrock site if soil contamination is not present or has been removed and then evaluating the site as exempt granular bedrock.
Bedrock Assessment 135.10(3)m(1) pg.67	Adds sentence: "If soil contamination above a Tier 1 level is not identified or if an over-excavation of contaminated soil has successfully removed all soil contamination greater than a Tier 1 level and monitoring wells are installed in the source area, exit monitoring criteria may be met by two consecutive samples collected at least six months apart; and concentrations in all monitoring wells must be less than the lowest target level."	Adds option of installing monitoring wells (MWs) in the source area at a nongranular bedrock site if soil contamination is not present or has been removed. By doing so exit monitoring criteria may be met by two consecutive sampling events separated by at least 6 months with concentrations below target levels in all site MWs versus 3 consecutive annual sampling events with concentrations below target levels in all site MWs.
Modeling 135.10(4)e pg.67	Highlighted phrase inserted: "At Tier 2, the groundwater well located within the modeled plume is assumed to be drawing from the contaminated aquifer, and the groundwater transport model is designed to predict horizontal movement to the well. If the groundwater professional ***or the department*** determines that assessment of the vertical movement of contamination is advisable to determine the potential or actual impact to the well source, a Tier 3 assessment of this vertical pathway may be conducted."	Adds "or the department" to language regarding when, during the groundwater ingestion pathway assessment, it is determined that assessment of the vertical movement of contamination is advisable for evaluating the potential or actual impact to the well source
Analyzing for methyl tertiary-butyl ether (MTBE) (2) Required MTBE testing. 135.19 pg.95	*Proposed Text: "*Water samples must be analyzed for MTBE when collected for risk-based corrective action as required in rules 567—135.8(455B) through 567—135.12(455B). These sampling requirements include but are not limited to Tier 2 and Tier 3 assessments where groundwater ingestion pathway evaluation and subsequent monitoring is required."	Limits the requirement for MTBE analysis to groundwater samples collected for Tier 2 or Tier 3 assessments where groundwater ingestion pathway evaluation and subsequent monitoring is required.

Frequently Asked Questions

- ***Owners and operators had requested more flexibility since Iowa continues to be ahead of the curve. Did EPA reflect this when they released the new Federal UST Regulations?***

  Iowa has already adopted the secondary containment and operator training requirements of the new regulations. These were significant changes to our UST regulations, and owners and operators have followed these regulations since 2007 and 2011 respectively. There will be a few changes to Iowa regulations on secondary containment and operator training, but they are not significant. The new federal regulations on UST system compatibility with alternate fuels such as higher blend ethanol and biodiesel mirror the requirements already in place in Iowa. There is still opportunity for flexibility.

- ***When do Iowa UST owners and operators have to implement the NEW Federal UST Regulations?***

  The federal deadline for states to implement the regulations is October 13, 2018 or three years after the effective date of the regulations. There are different timeframes for implementation depending on whether a state has State Program Approval or SPA.

  For states with SPA, including Iowa, the regulations become effective when the state formally adopts the federal regulations, which must be done before the October 13, 2018 deadline. The deadlines for Iowa owners and operators to meet different parts of the rules will be determined during Iowa's rule making process. Iowa must go through several steps to implement the rule, which can take up to a year or more. We must also renew our SPA with EPA, which will take time to complete. We are looking at early 2017 as the first effective date of the rule or roughly one year from now.

- ***What does it mean for Iowa as a State Program Approval (SPA) state? When was the last time Iowa applied for SPA?***

  There are 38 states with State Program Approval or SPA, including Iowa. All 50 states have a comprehensive set of UST regulations that include leak prevention, release detection and cleanup. These regulations are based on the federal UST regulations. SPA states have the lead role in UST program enforcement and rule making. Owners and operators in states that have SPA do not have to deal with two sets of statutes and regulations (state and federal) that may be conflicting.
  In states without an approved program, EPA will work with state officials in coordinating UST enforcement actions. Both federal and state regulations apply in states without SPA. The state regulations are generally just as stringent as, and in many cases significantly more stringent than EPA regulations. Iowa's UST Program was approved in March 1995.

- ***If approved for SPA how soon will stakeholders have to implement the new rules?***

  The state rules have to be in in place and enforceable before SPA application. Iowa rules will have to be adopted and implemented at the time of SPA application.

❖ ***How soon will owners/operators have to implement the new rules?***

Federal Regulation to be Implemented	Proposed Date of Implementation
Flow restrictors in vent lines	Immediate upon adoption
Testing following a repair	Immediate upon adoption
Closure of internally lined tanks that fail periodic inspection	Immediate upon adoption
Demonstrating compatibility	Implemented upon adoption
Airport hydrant fuel systems and field constructed tanks	Owners and operators must begin meeting these requirements by October 13, 2018
Secondary containment and interstitial monitoring	Implemented
UDCs for new dispensers—implemented	Immediate upon adoption
Operator training	Immediate upon adoption
Site assessment records for groundwater and vapor monitoring	Immediate upon adoption
Previously deferred UST systems (emergency generators, airport hydrant fuel systems and field constructed tanks)	Immediate for emergency generators October 13, 2018 for airport hydrant fuel systems and field constructed tanks
Spill prevention equipment testing	Owners and operators must conduct the first test or inspection by October 13, 2018
Overfill prevention equipment inspections	
Containment sump testing for sumps used for piping interstitial monitoring	
Release detection equipment testing	
Walkthrough inspections	Immediate upon adoption

❖ ***Who do I contact if I want to offer feedback or input regarding Iowa DNR's proposed rules?***

At any time during this process you may contact Paul Nelson by email at Paul.Nelson@dnr.iowa.gov, Fax: 515-725-8202 or by letter: Paul Nelson, Iowa DNR UST Section, 502 E 9th St, Des Moines, IA 50319